

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP03/09412

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl⁷ H01L21/337, H01L29/80, H01L29/808

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl⁷ H01L21/337, H01L29/80, H01L29/808

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1996	Jitsuyo Shinan Toroku Koho	1996-2003
Kokai Jitsuyo Shinan Koho	1971-2003	Toroku Jitsuyo Shinan Koho	1994-2003

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2001/0024138 A1 (Karl-Otto Dohnke), 27 September, 2001 (27.09.01),	27, 35, 36, 40, 41
Y	Par. Nos. [0071] to [0077]; Fig. 5 & JP 2002-526929 A	28, 29, 32, 34, 38, 39, 42, 43, 46, 47
A	Par. Nos. [0060] to [0066]; Fig. 5 & DE 19943785 A1 & WO 00/19536 A1 & EP 1116274 A1 & CN 1320277 A	30, 31, 37, 44, 45
Y	JP 2000-252475 A (The Kansai Electric Power Co., Inc.), 14 September, 2000 (14.09.00),	27-29, 32, 34-36, 38-43, 46, 47
A	Full text; Figs. 1 to 17 (Family: none)	30, 31, 37, 44, 45

☒ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search
04 September, 2003 (04.09.03)Date of mailing of the international search report
16 September, 2003 (16.09.03)Name and mailing address of the ISA/
Japanese Patent Office

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	EP 1119054 A1 (HITACHI LTD.), 25 July, 2001 (25.07.01), Full text; Figs. 1 to 5E & JP 2000-114544 A Full text; Figs. 1 to 5 & US 2002/0109145 A1 & WO 00/19541 A1	32
Y	JP 51-135381 A (Matsushita Electronics Corp.), 24 November, 1976 (24.11.76), Full text; Figs. 1 to 3 (Family: none)	32
Y	JP 2001-196602 A (Hitachi, Ltd.), 19 July, 2001 (19.07.01), Full text; Figs. 1 to 13 (Family: none)	38, 39, 46, 47
Y	JP 2001-144292 A (Denso Corp.), 25 May, 2001 (25.05.01), Full text; Figs. 1 to 8 (Family: none)	38, 39, 46, 47
Y	JP 2000-269518 A (Toshiba Corp.), 29 September, 2000 (29.09.00), Full text; Figs. 1 to 25 (Family: none)	38, 39, 46, 47
A	JP 2000-150912 A (Hitachi, Ltd.), 30 May, 2000 (30.05.00), Full text; Figs. 1 to 11 (Family: none)	1-26, 33
A	JP 4-276664 A (Toyota Central Research And Development Laboratories, Inc.), 01 October, 1992 (01.10.92), Full text; Figs. 1 to 10 (Family: none)	1-26, 33
A	EP 53854 A1 (PHILIPS ELECTRONIC AND ASSOCIATED INDUSTRIES LTD.), 16 June, 1982 (16.06.82), Full text; Figs. 1 to 14 & JP 57-124469 A Full text; Figs. 1 to 14 & GB 2089119 A & US 4754310 A	12, 37